

**COLORADO RIVER RECOVERY PROGRAM
FY-2006/2007 PROPOSED SCOPE OF WORK for:
O&M Grand Valley Propagation Facilities**

Project No.: 29a

Lead Agency: Fish and Wildlife Service
Colorado River Fishery Project

Submitted by: Chuck McAda
Thad Bingham (Co Lead)
Brian Scheer (Co Lead)

Address: 764 Horizon Drive, Building B
Grand Junction, CO 81506

Phone: (970) 245-9319

FAX: (970) 245-6933

E-Mail: chuck_mcada@fws.gov
thad_bingham@fws.gov
brian_scheer@fws.gov

Date: April 29, 2005

Revised date: February 7, 2006 (revised utility costs to account for increased gas prices*)

Category

- ☐ Ongoing project
☒ Ongoing-revised project
☐ Requested project
☐ Unsolicited proposal

Expected Funding Source

- ☒ Annual funds
☐ Capital Funds
☐ Other

I. Title of Proposal: **Operation and Maintenance of Grand Valley Endangered Fish Facilities.**

II. Relationship to 2003 RIPRAP:

General Recovery Program Support Action Plan:

IV. Manage genetic integrity and augment or restore populations.

IV.A. Genetics Management.

IV.A.4. Secure and manage genetic stocks in refugia.

IV.A.4.a. Razorback sucker

IV.A.4.a.(2) Upper Colorado River.

IV.C. Operate and maintain facilities.

IV.C.2. Grand Valley Endangered Fish Facility.

Green River Action Plan: Mainstem

IV.A.1.c. Implement (stocking) plan.

Colorado River Action Plan: Mainstem

- IV.A. Augment or restore populations as needed.
- IV.A.2.a. Develop State stocking plan for razorback sucker in the Colorado River in Colorado.
- IV.A.2.a.(2) Implement razorback sucker state stocking plan.

Colorado River Action Plan: Gunnison River

- IV.A. Augment or restore populations as needed.
- IV.A.3. Develop State stocking plan for the razorback sucker in the Gunnison River.
- IV.A.3.b. Implement razorback sucker State stocking plan.

III. Study Background/Rationale and Hypotheses

This project is directly related to Section 2.4 IV. “Conserve Genetic Integrity and Augment or Restore Populations” in the Recovery Program Recovery Action Plan (USFWS 2003). One of five elements in the Recovery Program is “native fish stocking”. The goal of this element is to produce sufficient captive-reared endangered fishes for conducting laboratory and field research and to develop brood stocks with genetic diversity similar to the wild stock used as founders (Williamson and Wydoski 1994). The need for captive-reared endangered fish and propagation facilities is identified in Wydoski (1994).

Fishery biologists have cultured and reared endangered fishes in the upper basin since 1987. Propagation began in the Grand Valley in 1991 with construction of Horsethief Refugia Ponds at Horsethief State Wildlife Area. The refugia ponds were constructed to develop and hold broodstock from the last wild razorback suckers captured from the upper Colorado River. Production of razorback suckers began in 1996 when an intensive-rearing hatchery building was built. The hatchery was expanded in 1998 and is currently capable of producing about 30,000 young razorback suckers averaging 8 inches long each year. Construction and leasing of grow-out ponds have produced 30 ponds totaling 92 surface acres suitable for rearing large razorback suckers for stocking into the rivers of the upper basin. Some of these ponds have not produced well and leases will be terminated in FY 06.

The first young razorback suckers produced in the Grand Valley facility were stocked into the Gunnison River in 1995. More than 33,000 razorback suckers have been stocked into the Gunnison and Colorado rivers since then. The Grand Valley facility currently has a broodstock of about 300 adults, including offspring (f_1 s) from wild razorback suckers comprising four year classes. Fish from younger year classes (f_2 s) are also being held and will be added to the broodstock as they mature. Accurate records of lineage for all fish are maintained to ensure that the maximum amount of original genetic material is maintained in the broodstock. Spawning is controlled to ensure that equal numbers of offspring (eventually encompassing several generations) from the

original, wild broodstock will be stocked into the river system over the duration of the propagation program.

IV. Study Goals, Objectives, End Product:

Goal: To operate a genetically sound captive propagation program for high priority endangered fish species for the RIP in the Upper Colorado River Basin in accordance with the Annual Propagation Operation Plan (Czapla 2003).

Objective: Operate and maintain propagation facilities that are needed to hold, rear, or produce captive-reared endangered fishes for the RIP in the Upper Colorado River Basin in accordance with the Annual Propagation Operation Plan.

End Product: Maintenance of endangered fish in refugia to prevent extinction; development of genetically sound broodstocks for production of young fish for stocking to stabilize or enhance wild stocks; production of captive-reared endangered fish for priority laboratory and field experiments.

V. Study area: Upper Colorado River Basin — Propagation facilities in Grand Valley, Colorado.

VI. Methods/Approach:

Conduct all tasks associated with the operation and maintenance of the Grand Valley Endangered Fish Facilities in accordance with the Genetic Management Plan (Williamson and Wydoski 1994; Czapla 1999) and the annual propagation plan.

VII. Task Description and Schedule:

All tasks are done annually

1. Develop and maintain captive razorback sucker broodstock.
2. Spawn razorback sucker broodstock and produce family lots for culture at the 24 Rd Hatchery.
3. Intensively rear razorback sucker at the 24 Rd Hatchery.
4. Stock 8-inch-long razorback suckers into grow-out ponds in spring.
5. Maintain water level, water quality, and productivity in 30 grow-out ponds totaling 92 surface acres.
6. Harvest, PIT tag, and stock 14,895 12-inch-long razorback sucker into the Gunnison, Colorado, and Green rivers in the following amounts: Colorado River, Rifle to Debeque reach (3,310); Colorado River, Palisade to CO-UT state line (3,310); Gunnison River, Hartland to Redlands reach (3,310); and lower Green River, Green River, UT (4,965).

VIII. FY-2006 Work

Fish and Wildlife Service

Labor for tasks 1-6:

Project Leader (1 GS 14 @2035/wk for 20 weeks)	40,700
Administrative Officer (1 GS 9 @1332/wk for 20 weeks)	26,640
Fishery Biologist (2 GS 9 @1332/wk at full time)	138,528
Biological Technician (1.5 GS 7@1030/wk)	80,340
Biological Technician (3 GS 6 @658/wk for 17 wks)	<u>33,558</u>
Labor Subtotal	319,766

Bozeman Fish Technology Center (in kind service)

Grind and sift fish food for larval razorback suckers <\$ 2,500>

Operations

Fish Food 16,000

Chemicals and Fertilizer 8,000
(Sodium Bicarbonate, Sparquat, Sodium Thisosulfate, HCG
[spawning hormones], Stress Coat, Salt, Cutrine Plus, Oxygen)

Hatchery Supplies and Equipment Repair and Replacement 10,000
(Pumps, aerators, belt feeders, clocks for belt feeders, UV bulbs
for sterilizer, sand for sand filter, piping repair, replacement valves,
repair furnace [heats water], replace nets, repair stocking tank, etc)

Office Supplies 1,500
(Paper towels, paper, telephone, 4 pagers (safety system), computer
repair, fax machine, copy machine, etc)

Vehicles 9,800
(GSA lease 12 months, \$550 month incl gas; two Service owned
6 months, gasoline and maintenance, \$3,200)

Electricity (Horsethief, Peters Ponds) 11,000

Travel 10,720

(Meeting attendance: two meetings, 3 people 3 days, @120 day = 2,160; two meetings in Denver, @160 day, 1 person x 5 days (800) and 2 people x 3 days (960) = 1,760)
 (Training: 2 plane tickets to NCTC @1000 (no per diem); Broodstock Genetics training 2 x 5 d @ 120 d; Recirculating Aquaculture Workshop, 2 people, \$400 registration, \$800 plane fare, 5 d @ \$120/d)

Operations Subtotal	\$ 67,020
FWS Total	

\$386,786

Bureau of Reclamation

Utilities, 24 Rd Hatchery (water, gas, electricity, phone)	\$ 38,000*
--	------------

Total	\$424,786*
-------	------------

FY-2007 Work

Fish and Wildlife Service

Labor for tasks 1-6 (actual estimated increase):

Project Leader (1 GS 14 @2180/wk for 20 weeks)	43,600
Administrative Officer (1 GS 9 @1365/wk for 20 weeks)	27,300
Fishery Biologist (2 GS 9 @1365/wk at full time)	141,960
Biological Technician (1.5 GS 7@1030/wk)	84,864
Biological Technician (3 GS 6 @658/wk for 17 wks)	<u>35,088</u>
Labor Subtotal	332,812

Bozeman Fish Technology Center (in kind service)	
Grind and sift fish food for larval razorback suckers	<\$ 2,500>

Operations (3% increase over 2006)

Fish Food	\$ 16,480
-----------	-----------

Chemicals and Fertilizer	\$ 8,240
--------------------------	----------

Hatchery Supplies and Equipment Repair and Replacement	\$ 10,300
--	-----------

Office Supplies	\$ 1,545
-----------------	----------

Vehicles	\$ 10,100
----------	-----------

Electricity (Horsethief, Peters Ponds)	\$ 11,330
Travel	\$ 11,042
Operations Sub total	\$ 69,037
Fish and Wildlife Service total	\$401,849
Bureau of Reclamation	
Utilities for 24 Rd Hatchery (gas, electricity, phone)	\$ 40,000*
Total	\$441,749*

IX. Budget Summary:

FY-2004 424,786*

FY-2005 441,749*

X. Reviewers:

Various Service and Recovery Program staff.

XI. References:

Czapla, T.E. 1999. Genetics Management Plan. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.

Czapla, T.E. 2003. Propagation Activities, 2003. Upper Colorado River Endangered Fish Recovery Program, Denver, Colorado.

USFWS (U. S. Fish and Wildlife Service). 2003. Recovery implementation program for endangered fish species in the upper Colorado River basin. U. S. Department of the Interior, Fish and Wildlife Service, Region 6, Denver, Colorado.

Williamson, J. H., and R. S. Wydoski. 1994. Genetics management guidelines. Recovery implementation program for endangered fish species in the upper Colorado River basin. U. S. Department of the Interior, Fish and Wildlife Service, Region 6, Denver, Colorado.

Wydoski, R. S. 1994. Coordinated hatchery facility plan: need for captive-reared endangered fish and propagation facilities. Recovery implementation program for

endangered fish species in the upper Colorado River basin. U. S. Department of the Interior, Fish and Wildlife Service, Region 6, Denver, Colorado.